

CHAPTER III

MANAGING HAZARDOUS WASTE – RCRA SUBTITLE C

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OVERVIEW

The improper management of hazardous waste poses a serious threat to human health and the environment. When EPA began developing the hazardous waste management regulations in the late 1970s, the Agency estimated that only 10 percent of all hazardous waste was managed in an environmentally sound manner.

Some threats posed by the mismanagement of hazardous waste are obvious. Reports of

chemical accidents or spills of hazardous waste that close highways, or illegal midnight dumping that contaminates property, are familiar. Yet, even when hazardous waste is managed or disposed of in a careful manner, it may still pose a threat to human health and the environment. For example, toxic hazardous wastes can leak from a hazardous waste landfill that is poorly constructed, improperly maintained, or structurally compromised. Such waste contamination can severely, and sometimes irreversibly, pollute ground water, the primary source of drinking water for half the nation.

Ground water pollution is not the only problem posed by hazardous waste mismanagement. The improper disposal of hazardous waste has polluted streams, rivers, lakes, and other surface waters, killing aquatic life, destroying wildlife, and stripping areas of vegetation. In other cases, careless waste disposal has been linked to respiratory illnesses, skin diseases (including skin cancer), and elevated levels of toxic materials in the blood and tissue of humans and domestic livestock. In still other cases, the mismanagement of hazardous waste has resulted in fires, explosions, or the generation of toxic gases that have killed or seriously injured workers and firefighters.

Since 1980, under RCRA Subtitle C, EPA has developed a comprehensive program to ensure that hazardous waste is managed safely: from the moment it is generated; while it is transported, treated, or stored; until the moment it is finally disposed (see Figure III-1). This cradle-to-grave management system establishes requirements for each of the following:

- **Hazardous Waste Identification** — To facilitate the proper identification and classification of hazardous waste, RCRA begins with hazardous waste identification procedures.
 - **Hazardous Waste Recycling and Universal Wastes** — To provide for the safe recycling of hazardous wastes, and facilitate the management of commonly recycled materials, RCRA includes provisions for hazardous waste recycling and universal wastes.
 - **Hazardous Waste Generators** — To ensure proper and safe waste management, the RCRA regulations provide management standards for those facilities that produce hazardous waste, and provide reduced regulations for facilities that produce less waste.
 - **Hazardous Waste Transporters** — To govern the transport of hazardous waste between management facilities, RCRA regulates hazardous waste transporters.
 - **Treatment, Storage, and Disposal Facilities (TSDF)** — To fully protect human health and the environment from hazardous waste treatment, storage, and disposal, the TSDF requirements establish generic facility management standards, specific provisions governing hazardous waste management units, and additional precautions designed to protect soil, ground water, and air resources.
 - **Land Disposal Restrictions** — To reduce the hazards posed by permanently land disposed waste, this program requires effective and expeditious hazardous waste treatment.
 - **Combustion** — To minimize the hazards posed by the burning of hazardous waste, RCRA imposes strict standards on units conducting such combustion.
 - **Permitting** — To ensure that only facilities meeting the TSDF standards are treating, storing, and disposing of hazardous waste, and to provide each TSDF facility with a record of the specific requirements applicable to each part of its operation, RCRA requires owners and operators of these facilities to obtain a permit.
 - **Corrective Action** — Since hazardous waste management may result in spills or releases into the environment, the corrective action program is designed to guide the cleanup of any contaminated air, ground water, or soil resulting from such management.
 - **Enforcement** — To ensure that RCRA-regulated facilities, from generators to TSDFs, comply with these regulations, RCRA provides EPA with the authority to enforce provisions of the Act.
 - **State Authorization** — To empower states and make enforcement more efficient, RCRA also allows EPA to authorize state governments to administer various parts of the RCRA program.
- Each of these aspects of the RCRA Subtitle C program is carefully detailed in this chapter.

Figure III-1: RCRA's Cradle-to-Grave Hazardous Waste Management System

